

Gates Formed-Fibre Products, Inc.)	Departmental
Androscoggin County)	Findings of Fact and Order
Auburn, Maine)	Air Emission License
A-678-71-C-A)	Amendment #2

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Gates Formed-Fibre Products, Inc. (GFFP) of Auburn, Maine was issued Air Emission License A-678-71-A-N on August 20, 2001, permitting the operation of emission sources associated with their non-woven fiber products facility. The license was subsequently amended on November 26, 2001 (A-678-71-B-M).
2. GFFP has requested an amendment to their license in order to install and operate polyester fiber production equipment. The equipment is to be relocated from the Fiber Extrusion facility in Eastport to GFFP in Auburn, with the exception of Oven #1 and the Space Heater, which are new pieces of equipment.

B. Emission Equipment

GFFP is authorized to operate the following equipment, in addition to equipment listed in air emission licenses A-678-71-A-N and A-678-71-B-M:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type, % sulfur</u>
Proc. Stm. Boiler	6.3	6000	natural gas, neg.
Hot Oil Heater	1.36	1300	natural gas, neg.
Space Heater	3.24	3090	natural gas, neg.
Oven #1	4.0	3810	natural gas, neg.

Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>
Crystallizer #1	900 lb/hr PET	cyclone-baghouse
Crystallizer #2	900 lb/hr PET	cyclone-baghouse
Crystallizer #3	900 lb/hr PET	cyclone-baghouse
Baler #1	6,000 lb/hr fiber	screen filter
Baler #2	6,000 lb/hr fiber	screen filter

* PET – Polyethylene Terephthalate

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as given in Maine’s Air Regulations. This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

Process Description

The process that is to be relocated to GFFP’s Auburn facility can be divided into three separate categories: spin line, draw line and parts cleaning. The spin line creates the fibers and includes the processing and melting of polyethylene terephthalate (PET) chips, the spinning of PET fibers, and the application of a spin finish solution to the fibers. The draw line finishes the fibers and includes the drawing, crimping, heat setting, cutting and baling of the fibers. Parts cleaning involves removal of PET from spin-line parts in natural gas fired ovens.

B. Fuel Burning Emission Sources

GFFP has proposed to relocate three fuel burning units and two cleaning ovens from their Fiber Extrusion facility in Eastport, Maine to GFFP in Auburn. The Space Heater is rated at 3.24 MMBtu/hr, was manufactured in 2001 and will be installed in 2002. The Process Steam Boiler is rated at 6.3 MMBtu/hr and was manufactured and installed at the Fiber Extrusion facility in 1989. The Hot Oil Heater is rated at 1.36 MMBtu/hr and was manufactured and installed at the Fiber Extrusion facility in 1994. All units previously fired propane at the Fiber Extrusion facility, and will fire only natural gas at GFFP.

Based on the relatively small size of the fuel burning units and the quantity of pollutants that could potentially be emitted, it is determined by the Department that any add-on pollution control device would be economically unjustified. Therefore, BACT for the Space Heater, Process Steam Boiler and Hot Oil Heater shall be the firing of natural gas.

A summary of the estimated emission rates for each of the pollutants is discussed below:

1. PM and PM₁₀ emission rates are based upon AP-42 factors, which have been determined to represent BACT for the Space Heater and Process Steam Boiler and based upon AP-42 factors dated 7/98 for natural gas combustion for the Hot Oil Heater.
2. SO₂, NO_x, CO and VOC emission rates are based upon AP-42 data dated 7/98 for natural gas combustion.
3. Visible emissions from each fuel burning unit shall not exceed 10% opacity on a six-minute block average basis.

C. New Oven

GFFP has applied to install an additional oven, on the draw line of the process. The Draw Oven has a maximum heat input capacity of 4.0 MMBtu/hr, was manufactured in 2001 and will be installed in 2002. Emissions from the Draw Oven are sent to the wet fiberbed scrubber system.

A summary of the estimated emission rates for each of the pollutants is discussed below:

1. PM and PM₁₀, SO₂, NO_x, CO and VOC emission rates are based upon numbers provided in the application dated November, 2001.
2. Visible emissions from the Draw Oven shall not exceed 10% opacity on a six-minute block average basis.

D. Fiber Production Equipment

During the general processing of polyester staple manufacturing, PM and VOC are emitted from various parts of the process. BACT for the fiber production equipment shall be the use of a cyclone and baghouse on the crystallizers.

A summary of the estimated emission rates for each of the pollutants is discussed below:

1. PM and PM₁₀ emission rates are based upon 1995 data, and can be found in the application submitted on November 16, 2001.
2. VOC emission rates are based upon AP-42 data dated 8/82 for synthetic fiber manufacturing for polyester melt spun staple and a maximum production rate of 23,652,000 pounds of fiber per year.
3. Visible emissions from crystallizers, spinnerettes, draw line, spin finish and baling operations shall not exceed 5% opacity on a six-minute block average basis, except for no more than 1 six-minute block average in any one-hour period.

E. Annual Emission Restrictions

GFFP shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	12.2
PM ₁₀	12.2
SO ₂	0.2
NO _x	27.0
CO	22.7
VOC	14.2

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-678-71-C-A, subject to the conditions found in Air Emission License A-678-71-A-N, in amendments A-678-71-B-M, and in the following conditions:

Conditions (16)A and (17)A of Air Emission License A-678-71-A-N are no longer applicable. Condition (27)A of this amendment sets the new fuel use limit.

The following condition shall replace Condition 17(B) of Air Emission License A-678-71-A-N:

(17)

- B. The following emission limits from the fiberbed system shall remain in effect until all equipment represented on this license amendment is installed and operational:

<u>Pollutant</u>	<u>lb/hr</u>
PM	1.19
PM ₁₀	1.19
SO ₂	0.07
NO _x	2.24
CO	1.84
VOC	0.69

The following emission limits from the fiberbed system shall come into effect only when all the new equipment represented in this license amendment is installed and operational:

<u>Pollutant</u>	<u>lb/hr</u>
PM	1.21
PM ₁₀	1.21
SO ₂	0.07
NO _x	2.62
CO	2.16
VOC	0.79

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The following Condition shall replace Condition (21) of Air Emission License A-678-71-A-N:

- (21) GFFP shall perform stack testing for PM (EPA Method 5), visible emissions (EPA Method 9), and VOC (EPA Method 25A) in accordance with the Department's Air Emission Compliance Test Protocol on the wet fiberbed scrubber system no later than May 10th, 2002, and shall submit test results to the Department no later than 30 days after completion of the testing. GFFP, if required to do so by the Department, shall conduct stack emission testing, and demonstrate compliance with the applicable standard, on any source within 60 days after receipt of notice from the Bureau of Air Quality.

The following are new conditions:

- (27) GFFP may install and operate the Space Heater, Process Steam Boiler and Hot Oil Heater, in addition to the boiler emission sources included in Air Emission License A-678-71-A-N, and in amendment A-678-71-B-M.
- A. Fuel use shall not exceed 536 MMscf/yr of natural gas (facility-wide), based on a 12-month rolling total. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- B. Visible emissions from each fuel burning unit shall not exceed 10% opacity on a six-minute block average basis.
- C. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Space Heater	lb/MMBtu	0.01	-	-	-	-	-
	lb/hr	0.03	0.03	0.01	0.31	0.26	0.02
Process Steam Boiler	lb/MMBtu	0.01	-	-	-	-	-
	lb/hr	0.05	0.05	0.01	0.60	0.51	0.04
Hot Oil Heater	lb/hr	0.01	0.01	0.01	0.13	0.11	0.01

- (28) GFFP may install and operate a Draw Oven, with a maximum heat input capacity of 4.0 MMBtu/hr. Emissions from the Draw Oven shall be vented to the wet fiberbed scrubber system, and GFFP shall operate the Draw Oven only at times when the wet fiberbed scrubber system is in operation.
- (29) Visible emissions from the crystallizers, spinnerettes, draw line, spin finish and baling operations shall be limited to 5% opacity on a six-minute block average basis, except for no more than 1 six-minute block average in any one-hour period.

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- (30) GFFP shall keep a log recording monthly fiber production, in addition to a 12-month rolling total.
- (31) Cyclones and baghouses shall be installed, maintained and operated on the crystallizers, and shall be operated at all times when the crystallizers are in operation.
- (32) GFFP shall inspect the baghouses once per day, shall maintain inspection records and shall record all maintenance performed and baghouse failures.
- (33) This amendment shall expire concurrently with Air Emission License A-678-71-A-N.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: November 16, 2001

Date of application acceptance: November 21, 2001

Date filed with the Board of Environmental Protection: _____

This Order prepared by Elisha McVay, Bureau of Air Quality.